



STEVENS  
INSTITUTE *of* TECHNOLOGY  

---

THE INNOVATION UNIVERSITY



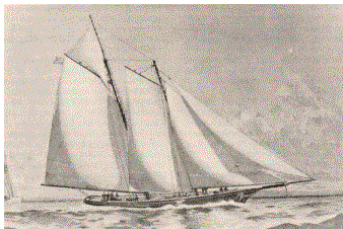
# Stevens Institute of Technology



- Col. John Stevens III (1749-1838)
  - Treasurer of NJ in Revolutionary War
  - Bought land that became Hoboken
- With second son Robert Livingston Stevens, pioneered steam transportation
  - First U.S. steam locomotive
    - Robert invented the T-rail and the cow-catcher
  - Helped pass first U.S. patent laws



- Edwin A. Stevens
  - 1795 - 1868
  - Third son of Colonel John
  - **Founded Institute in 1870**
  - Stevens family made fortune in transportation: toll roads, ferries and railroads



The Stevens Family founded the America's Cup



ASME launched at Stevens in 1880



Gantt graduated from Stevens in 1884

# More than 140 Years of Innovation



## Notable Alumni Achievements

- Invented the field of scientific management
- Invented the Gantt Chart
- Founded General Motors and Texas Instruments
- Originated the mobile art form
- Claimed two Nobel Prizes
- Discovered the neutrino
- Directed space shuttle design for NASA's Apollo missions
- Pioneered one of the nation's first true intranets
- Invented the IMAP software protocol
- Invented bubble wrap



# Strategic Plan – Stevens 2022

*The Future. Ours to Create.*

## Strategic Priorities

- Student-Centricity: nurturing student success
- Excellence In All We Do: strengthening the caliber of people, facilities and research
- Through Collaboration, Impact: offering a holistic, interdisciplinary education
- Technology at Our Core: using technology to transform

## Areas of Focus

- Healthcare and Medicine
- Sustainable Energy
- Financial Systems
- Defense and Security
- Coastal Sustainability
- Science, Technology, Engineering and Mathematics (STEM) Education



# Stevens Today



## Students

2,900 undergraduate students  
3,300 graduate students  
47 U.S. states and 60 countries represented  
Average GPA 3.83. SAT 1260-1410

## Programs of Study

34 undergraduate majors  
19 PhD programs  
59 Master's degree programs  
100+ graduate certificates

## Faculty

380 faculty, including 291 full time





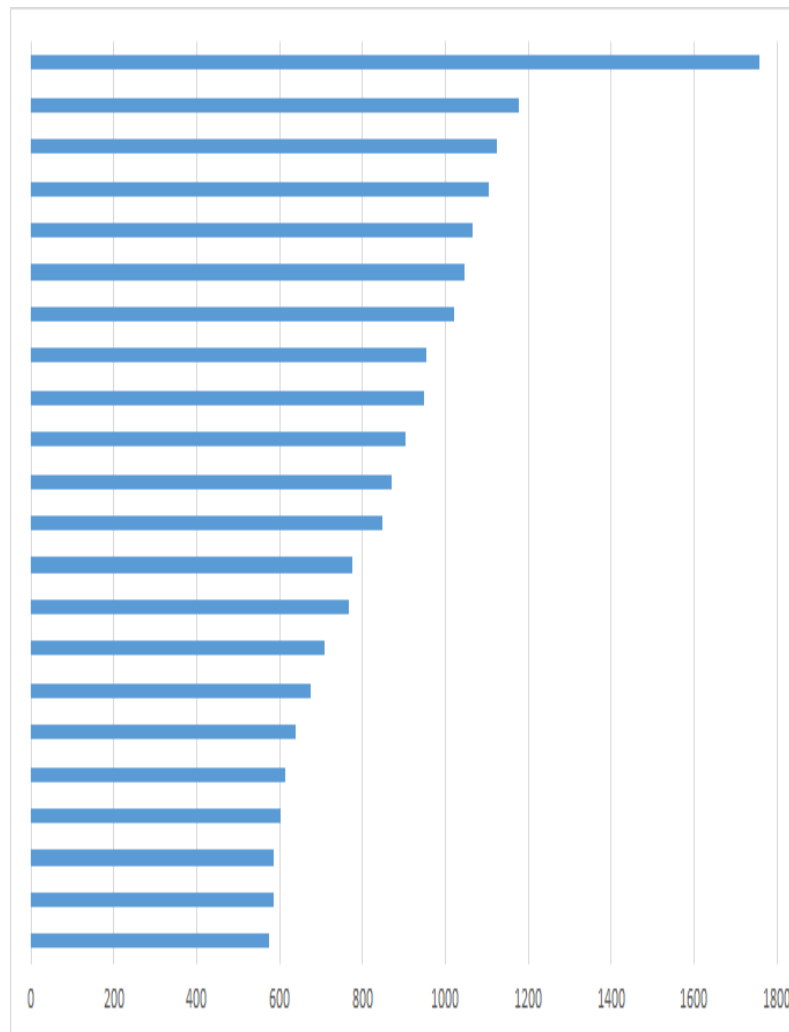
# Stevens Education Driven by Real-World Experience

- Cooperative education
- Internships
- Faculty-mentored research
- Senior design
- Cross-disciplinary collaboration reflective of real-world project teams
- Case studies drawn from industry

# Stevens is 8th in Engineering Master's Degrees



1. University of Southern California
2. University of Florida
3. The Johns Hopkins University
4. Georgia Institute of Technology
5. Columbia University
6. Stanford University
7. University of Michigan
8. Stevens Institute of Technology
9. Carnegie Mellon University
10. Arizona State University
11. NYU Polytechnic School of Engineering
12. North Carolina State University
13. Massachusetts Institute of Technology
14. Cornell University
15. University of Illinois, Urbana—Champaign
16. The George Washington University
17. San Jose State University
18. The University of Texas at Dallas
19. New Jersey Institute of Technology
20. University of California, Los Angeles
21. Northeastern University (tied with UC---LA)
22. University of Pennsylvania



\*Ref: ASEE,  
2013-2014 Degrees



# Stevens Leadership



- Ranked 3<sup>rd</sup> in the U.S. for 20-year net ROI in 2015 PayScale Report
- Ranked 3<sup>rd</sup> in nation for “Best Career Placement” by Princeton Review 2015
- Ranked 7<sup>th</sup> in nation for best engineering colleges by USA Today 2015
- Ranked 8<sup>th</sup> in the nation for Engineering Master’s Degrees (ASEE)
- Faculty appointed to the National Academy of Engineering (NAE) and the National Academy of Science (NAS)
- Nobel Prize winning faculty in Physics
- Finished **1st globally in the 2015 U.S. Department of Energy (DOE) Solar Decathlon**
- Won the **National Award for Excellence in Academic Leadership of Undergraduate Education Programs in Engineering Management by the American Society for Engineering Management (ASEM) in 2013**
- Leading “University Affiliated Engineering Research Center” in Systems Engineering (UARC-SERC)



# SERC: 22 University Research Collaborators



# The Research Enterprise



## NATIONAL CENTERS of EXCELLENCE at STEVENS INSTITUTE of TECHNOLOGY



### CSR

The National Center for Secure Resilient Maritime Commerce



### SERC

Systems Engineering Research Center



### ACCESS

Atlantic Center for the Innovative Design and Control of Small Ships

## Overview

- \$43 million in sponsored research
- 70% of faculty conduct externally funded research
- 400 Doctoral Students
- Funding from NSF, NIH, DARPA, ARMY, NAVY, AIR FORCE, DOE
- 3 National Centers of Excellence
- 11 Additional Research Centers

## Research Centers

- Center for Complex Systems & Enterprises (CCSE)
- Financial Systems Center (FSC)
- Center for Coastal Resilience and Urban Xcellence (CRUX)
- Center for Healthcare Innovation (CHI)
- Center for Environmental Systems (CES)
- Center for Maritime Systems (CMS)
- The NJ Center for Microchemical Systems
- Highly Filled Materials Institute (HDMI)
- Design & Manufacturing Institute (DMI)
- Center for Decision Technologies (CDT)
- Center for Innovation in Engineering & Science Education (CIESE)



## About the School of Systems & Enterprises (SSE)

# SSE: Divisions and Research Centers



## SYSTEMS & SOFTWARE DIVISION

Dr. Jon Wade

**BE:** Software Engineering

**ME:** Systems Engineering; Space  
Systems Engineering

**MS:** Software Engineering;  
Socio-Technical Systems

**Ph.D.:** Systems Engineering;  
Socio-Technical Systems

Systems Engineering  
Research Center (SERC)

## ENTERPRISE SCIENCE & ENGINEERING DIVISION

Dr. Jose Ramirez-Marquez

**BE:** Engineering Management

**ME:** Engineering Management;  
Systems Analytics

**Ph.D.:** Engineering Management

Center for Complex Systems  
and Enterprises (CCSE)  
Center for Coastal  
Resilience and Urban  
Xcellence (CRUX)

## FINANCIAL ENGINEERING DIVISION

Dr. Khaldoun Khashanah

**MS:** Financial Engineering;  
Financial Analytics

**Ph.D.:** Financial Engineering

Financial Systems  
Center (FSC)



SYSTEMS ENGINEERING  
Research Center



CENTER FOR  
COMPLEX SYSTEMS  
& ENTERPRISES



STEVENS  
INSTITUTE of TECHNOLOGY  
THE INNOVATION UNIVERSITY

FINANCIAL  
SYSTEMS  
CENTER



# SSE's Open Academic Model

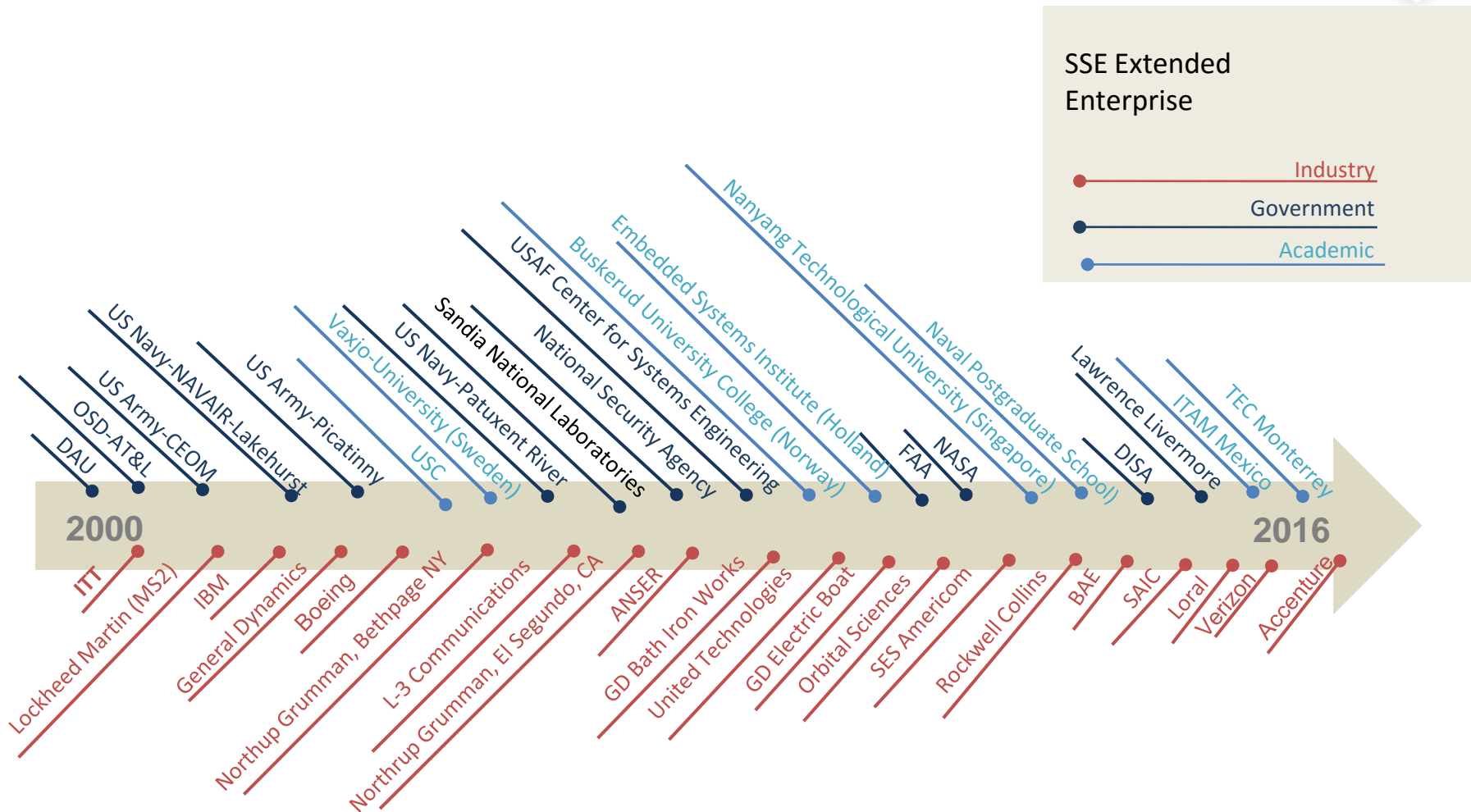


- Develop meaningful **alliances with academic partners** to develop and leverage “best of breed” thinking and competencies
- **Blur the boundary** between the academic setting and the industry/government reality:
  - Bringing a fresh perspective to industry and government in an executable form
  - Bringing the industry and government reality into academia in a researchable or usable form





# Our Partners





STEVENS  
INSTITUTE *of* TECHNOLOGY  

---

THE INNOVATION UNIVERSITY